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(Gillies. Exped. Chile). U. S. Naval Astronomical
to the Southern Hemisphere, during the years
1849-'50-'51-'52. Vol. 2. 1855. pp.207-229,
pls.34-38.

REPTILES

By Charles Girard

BATRACHIA

Family of Ranidae

S.R.

[Gillies, Exped. Chile] U.S. Naval Astronomical
to the Southern Hemisphere, during the years
1849-'50-'51-'52. Vol. 2. 1855, pp. 207-229, pl. 34-38-40

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REPTILES.

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BATRACHIA.

FAMILY OF RANIDÆ.

Genus CYSTIGNATHUS, Wagler.

GEN. CHAR. Vomerine teeth disposed upon a transverse or oblique row more or less interrupted in the middle, and situated either between the inner nares or behind them; tongue circular, subcircular, or subcordiform, posteriorly entire, and either attached by its whole surface or very slightly free behind; tympanum distinct; toes either bordered by a membranous fold or slightly webbed at their base.

SYN. *Cystignathus*, WAGL. Nat. Syst. Amph. 1830, 202.

GRD. Proc. Acad. Nat. Sc. Philad. VI, 1853, 420.

OBS. The genus *Cystignathus* is here admitted within the limits we have recently assigned to it on the occasion of the study which we have made of the species of exotic batrachians brought home by the United States Exploring Expedition, to which we would refer herpetologists.

CYSTIGNATHUS TAENIATUS, Girard.

PLATE XXXIV, Figs. 8-11.

SPEC. CHAR. Vomerine teeth, situated a little behind the inner nares, well separated upon the middle of the palate; tongue subelliptical, free posteriorly, and slightly notched upon the same margin. Greenish yellow, with two dorsal blackish stripes; limbs barred above. A dark vitta upon the sides of the head, extending from the nostril, across the eye, to the shoulder.

SYN. *Cystignathus taeniatus*, GRD. Proc. Acad. Nat. Sc. Philad. VII, 1854, 226.

DESCR. The general appearance of this species is rather short, the head forming about the third of the entire length—the posterior limbs, of course, excepted. The head is longer than broad. The snout is subacute and rounded; slightly declive from the eyes forwards and sideways. The *canthus rostralis* is depressed; the nostrils, very small, are situated nearer to the tip of the snout than to the anterior rim of the orbit. The eye is well developed and subcircular, its longitudinal diameter being equal to the interocular space above; the upper eyelid is minutely granular. The tympanum is quite small, though conspicuous. The tongue is well developed, in the shape of a subelliptical disk, broadest behind, slightly notched posteriorly, and free upon nearly the posterior third of its length. The inner nares are subelliptical, oblique, and conspicuous. The vomerine teeth are exceedingly minute, and disposed upon two very small and subelliptical distant eminences, situated between and a little behind the inner

nares. The openings for the tubes of eustachii are smaller and less conspicuous than the inner nares. The subgular air-bladders are very much developed. The anterior limbs, when stretched backwards alongside with the body, bring the tip of the inner finger close to the groin, beyond which, consequently, the other fingers extend. The fingers are slender, and their tips slightly swollen. The innermost is stoutish, and shorter than the second, which is shorter than the fourth—the third being the longest. The palm of the hand is provided with quite large tubercles; that at the base of the inner finger is the largest of all. The first phalanges are marked beneath by similar tubercles, though more regularly conical in their shape. The tubercles under the second phalanx of the third and fourth fingers are quite reduced. The posterior limbs are long and slender, measuring nearly two inches from their origin to the tip of the longest toe. The foot is narrow, and likewise slender, as well as the toes, which are free, there being but a rudimentary webbing to be observed between the three middle ones. The sole of the foot is smooth; the inner metatarsal tubercle is rather small and conical, and the outermost still smaller and inconspicuous. Small tubercles exist under the articulation of the first and second phalanges, except under the inner toe. The second toe is shorter than the fifth, whilst the third is longer than the latter. The fourth is much the longest. The inferior surface of the thighs alone is granular or warty; the skin elsewhere is perfectly smooth, save minute pores which may be observed about the tympanum and on the sides of the back, where they constitute a narrow band, extending from the occiput to near the groins. The ground color is olivaceous or greenish yellow. The region between and behind the eyes exhibit traces of black markings which cannot be defined upon the specimen before us. There is a black, narrow vitta along the line of the *canthus rostralis*, terminating anteriorly by an expansion over the nostrils posteriorly; the vitta when reaching the eye sends off a tapering branch along the inferior rim of the orbit, behind which the vitta reappears considerably broader, and passing over the tympanum terminates above the insertion of the anterior limbs. From the upper and posterior part of the orbit, above the tympanum, originates a blackish stripe, which extends to the posterior extremity of the body, covering entirely the series of dorsal pores above alluded to. The bands from either side converge in their extension. The limbs above are barred with greyish black. The inferior surface of head, body, and limbs is of a uniform dull yellow hue.

This species was obtained in the vicinity of Santiago, Chile.

Plate XXXIV, fig. 8 represents the profile of *Cystignathus taeniatus*, of the size of life.

fig. 9 is a view from below.

fig. 10, inferior surface of the hand.

fig. 11, inferior surface of the foot.

Figs. 10 and 11 are slightly magnified.

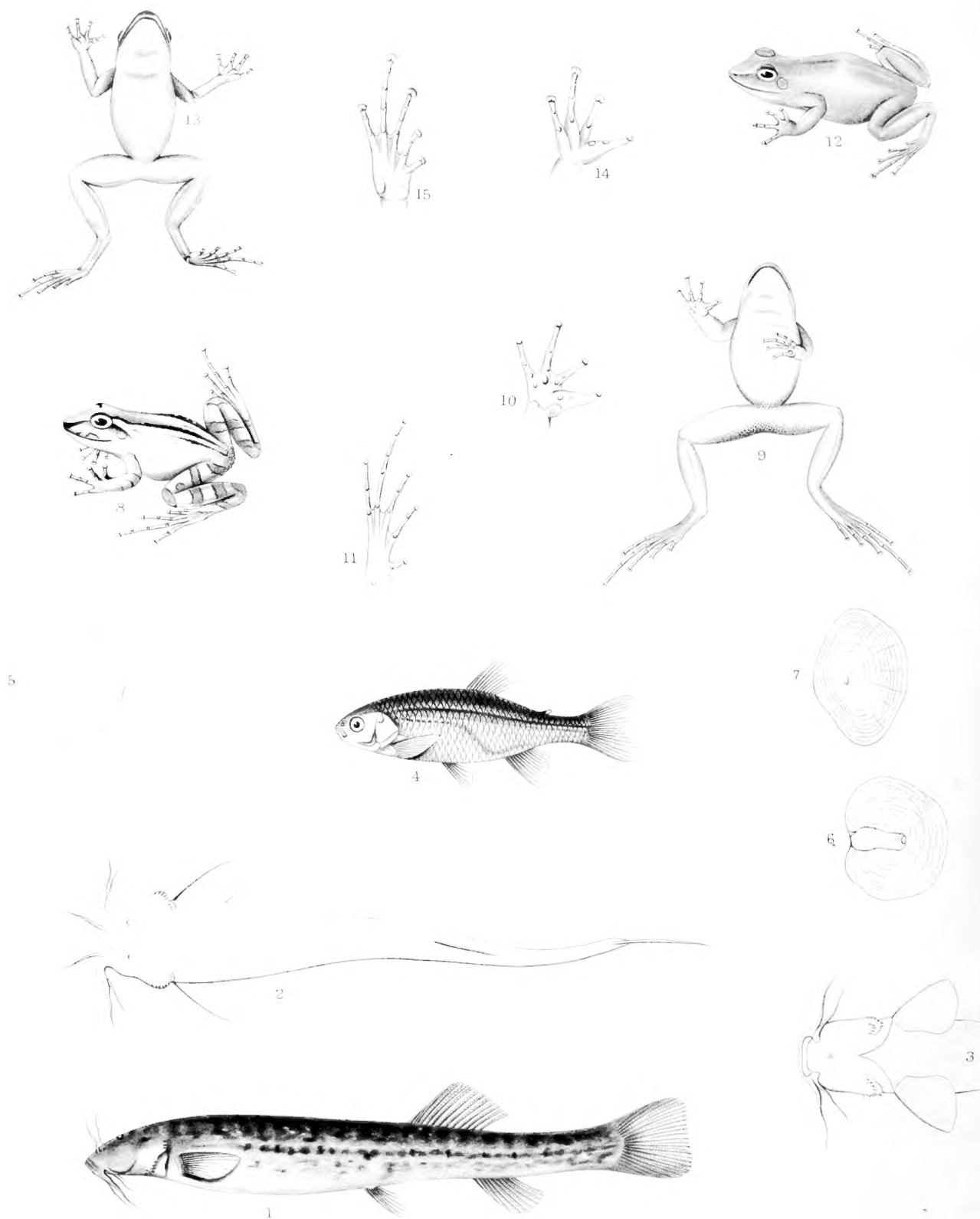
FAMILY OF HYLIDÆ.

Genus PHYLLOBATES, Dum. & B.

GEN. CHAR. Snout protruding over the lower jaw; tongue free posteriorly upon a considerable portion of its length; no teeth on the palate; tympanum visible; tubes of eustachii small; fingers and toes slightly depressed, entirely free, dilated upon their extremity into a disk slightly convex below and above, the latter surface being provided upon its middle with a small groove. Protrusion of the first cuneiform bone very little developed; transverse apophysis of the sacral vertebræ not dilated.

SYN. *Phyllobates*, DUM. & B. Erp. Gén. VIII, 1841, 637.

OBS. The shape of the snout reminds us of *Elosia*, but the latter is provided with palatine teeth.



PHYLLOBATES AURATUS, Girard.

PLATE XXXIV, Figs. 12—15.

SPEC. CHAR. Tongue narrow and elongated, free for about the half or two-thirds of its length; anterior limbs, when stretched backwards, reaching the vent with the tip of longest finger; inferior surface of thighs granular; color uniform bluish brown.

SYN. *Phyllobates auratus*, GRD. Proc. Acad. Nat. Sc. Philad. VII, 1854, 226.

DESCR. The body is elongated and depressed, as well as the head, which constitutes a little less than the third of the whole length; seen from above, the head is subtriangular, subtruncated anteriorly, and sloping inwardly. The nostrils are small, situated on the sides and towards the tip of the snout, and not to be seen from above; the sides of the head are declivous. The eyes are well developed, subelliptical in form, their horizontal diameter being equal to the distance between the anterior rim of the orbit and the tip of the snout, and comprised a little over twice upon the distance between the external margins of the upper eyelids. The tympanum is well developed, oblong in shape, and vertically situated close to the orbit. The angle of the mouth extends as far back as the posterior rim of the orbit. The tongue is narrow and elongated, posteriorly obtuse, and free for about the half or two-thirds of its length. The inner nares are very large and subcircular, situated far apart on the sides of the roof of the mouth, which is concave and perfectly smooth, there being no teeth on either the vomer or palatine bones. The openings for the tubes of eustachii are small, and not conspicuous. The anterior limbs are slender, the fingers stretching beyond the groin. The fingers are free, slender, depressed, and dilated upon their tips; upper surface of the dilation divided by a medial groove or furrow. There is a large metacarpal tubercle; smaller tubercles are observed under the first phalanx, and under the second of the two external fingers. The palm of the hand is smooth. The first finger is longer than the second; the fourth is the shortest, and the most slender of all. The hind limbs are stoutish, one-fourth longer than the body and head together—the tibia being more developed than the femur. The toes are free, slender, depressed and dilated upon their extremities, and grooved above in the same manner as the fingers. The sole of the foot is smooth, and the inferior surface of all the phalanges provided with very small tubercles. The internal metatarsal tubercle is elongated, the external one rounded; both of moderate development. The inferior surface of the thighs is granular; the skin is otherwise perfectly smooth; its surface, under the magnifying glass, exhibits very minute pores, scarcely more developed under the belly than on the back. The color above is metallic golden, whilst beneath a uniform bluish brown predominates.

Collected by the late Professor C. B. Adams, on the island of Taboga, in the bay of Panama.

Plate XXXIV, fig. 12, represents *Phyllobates auratus* in a profile view, size of life.

fig. 13, is a view from beneath.

4/ fig. 14, a hand, seen from below.

fig. 15, a foot, also from below.

Figs. 14 and 15 are slightly magnified.

OPHIDIA.

FAMILY OF VIPERIDÆ.

Genus ELAPS, Schn.

GEN. CHAR. Body slender and cylindrical; tail short and conical; head somewhat depressed—in most cases continuous with the body, subelliptical when viewed from above, tapering for-

wards, and covered above with plates, generally nine in number; no pit between the eye and nostril; loral plate present; mouth moderately cleft, not dilatable; upper jaw furnished on either side and quite posteriorly with a poisonous fang; scales smooth; preanal scutella bifid; subcaudal scutellæ divided.

SYN. *Elaps*, SCHN. Hist. Amph. Nat. and Lit. 1801, 289.

FITZ. N. Class. Rept. 1826, 33.

B. & G. Cat. Rept. N. Amer. I, 1853, 21.

Obs. The characteristic of the genus *Elaps*, as given above, we wish it to be understood, is merely provisional, not having had at our command a sufficient number of the species described by the different authors. We reserve it for another occasion to revise its diagnosis in a manner satisfactory both to our mind and to the actual state of herpetology.

ELAPS NIGROCINCTUS, Girard.

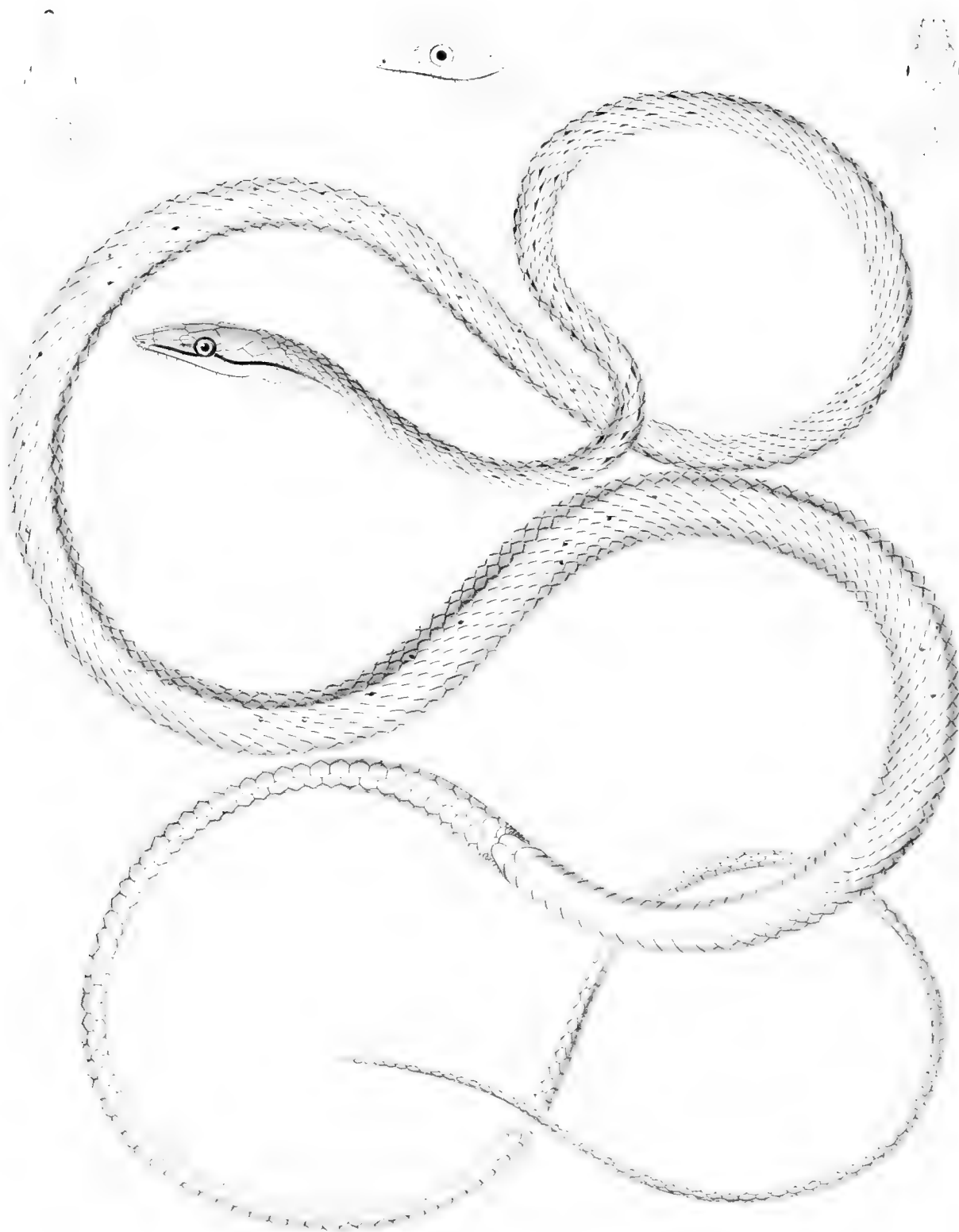
PLATE XXXV, Figs. 1—6.

SPEC. CHAR. Head subelliptical, broader than the body, which is long and cylindrical; tail conical, abruptly tapering from its base; scales smooth, disposed upon fifteen rows; color reddish, annulated with jet black; tip of scales blackish; anterior portion of head black; an occipito-temporal yellowish ring; tip of tail black.

SYN. *Elaps nigrocinctus*, GRD. Proc. Acad. Nat. Sc. Philad. VII, 1854, 226.

DESCR. The head is slightly detached from the body by a somewhat contracted neck. The eyes are very small, situated near the upper surface of the head, their diameter being equal to the width of the suroculary plate. The snout is obtusely rounded. The vertical plate is moderately elongated and subpentagonal, pointed posteriorly; its anterior margin is sometimes perfectly straight, at others subconvex, so as to assume a subhexagonal shape. The occipitals are large, broad, and elongated, subrounded exteriorly, truncated anteriorly, permitting the posterior angle of the vertical to engage between them. The suroculary is short, a little longer than broad, and irregular in its outline, which is five-sided; the side limiting the orbit above being slightly concave, the others nearly straight. The postfrontals are well developed, broader than long, and irregularly six-sided, sending an angular projection towards the sides of the head, where it engages between the ante-orbital and postnasal plates, without, however, reaching the labials. The prefrontals are subquadrangular, broader than long, their external margin reaching the upper edge of the nostrils. The rostral is broadly developed, rather short, subpyramidal in form, and concave beneath. The nasals are well developed, the posterior one being nearly as long as the anterior is high. The nostrils are small and circular, intermediate between the two nasal plates. The anteorbital is irregularly triangular, rather elongated, and similar in shape to the postnasal, the anterior angle of which meets its own posterior angle a little in advance of the commissure between the second and third labials. The postorbitals, two in number, are nearly equal in size, and subpentagonal in shape. There are three temporal shields well developed, the posterior one being the largest. We observe seven upper labials, increasing in size from the first or anterior to the sixth inclusive; the seventh is a little smaller than the sixth; the third and fourth forming part of the orbit. There are six lower labials, of which the fourth is the largest, and much expanded beneath; the fifth is nearly equal to the third; the sixth is a little smaller than the latter; the second is the smallest. The symphyseal plate is triangular. The mental shields constitute three pairs; the anterior two being parallel to one another; the third is obliquely situated along the margin of the





Ophiophagus
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fourth, fifth, and sixth lower labials. The body is subcylindrical, a little more slender anteriorly than posteriorly. The tail is short, subconical, and tapering to a point; it forms but the two-twenty-first part of the whole length. The scales are perfectly smooth, constituting fifteen longitudinal rows, larger in the outermost row, and smallest upon the dorsal line or middle row. The scales themselves are acuminate posteriorly. On the tail they are shorter, and truncated posteriorly, constituting seven rows upon its origin, and three only towards its tip. The abdominal scutellæ are two hundred and eighteen in number: the preanal is bifid. The subcaudal scutellæ are all bifid, and constitute thirty-six pairs. The tip of the tail is conical in the adult state, and somewhat acute in young specimens.

Abd. sc. 217 + 1. Subc. sc. 18. Dors. rows 15. Total length 29 inches; tail $2\frac{7}{10}$.

The body is reddish, annulated with jet black. The anterior part of the head from behind the eye is black, then follows a yellow ring, embracing in its width almost the whole length of the occipital plate, and just behind it the first black ring, embracing the posterior part of the head and neck, covering about six scales. There are fifteen more black rings hence to the tail, each covering about three scales. The intermediate red spaces embrace anteriorly fourteen scales, ten upon the middle region of the body, and eight towards the tail. There is an obsolete indication of a yellow margin to the anterior two black rings. The scales in the red spaces are tipped with black on the tail; the black rings are much wider than the red ones, there being three of each kind; the tip is black. The inferior surface is reddish-yellow sparsely spread over with small and irregular black spots.

Specimens of this species were collected at Taboga, on the bay of Panama, Central America.

Plate XXXV, fig. 1, represents *Elaps nigrocinctus*, of the size of life.

fig. 2, a view of the head, seen from above.

fig. 3, a side view of the head.

fig. 4, the head, seen from below.

fig. 5, shows the vent and the bifid preanal scutella.

fig. 6, is a portion of the left side of the body, showing the shape and number of rows of scales.

Figs. 2—5 are slightly magnified.

FAMILY OF OXYCEPHALIDÆ.

Genus DRYOPHIS, Fitz.

GEN. CHAR. Body and tail long and slender. Cephalic plates normal. Eyes large. One anteorbital plate; several postorbitals. No loral. One nasal, with nostril in its middle. Rostral situated under the snout, which protrudes over the lower jaw. Several labials constituting the inferior rim of orbit. Dorsal scales smooth. The last two abdominal scutallæ bifid; subcaudals all bifid.

SYN. *Dryophis*, FITZ. N. Class. Rept. 1826, 29 and 60.

DRYOPHIS VITTATUS, Girard.

PLATE XXXVI, Figs. 1—6.

SPEC. CHAR. Three postorbital plates, two of which constituting the posterior rim of the orbit; the third being placed behind them. Fifth, sixth, and seventh, or fourth, fifth, and sixth labials

constructing the inferior rim of the orbit. A black vitta along the upper margin of upper maxillary plates extending posteriorly along a portion of the neck.

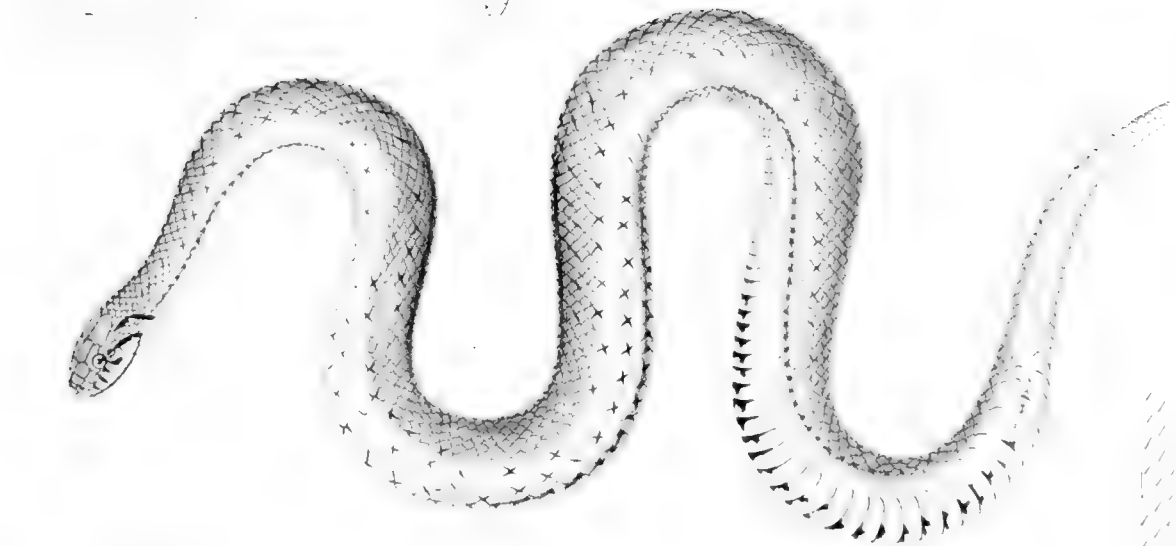
SYN. *Dryophis vittatus*, GRD. Proc. Acad. Nat. Sc. Philad. VII, 1854, 226.

DESCR. The entire length of the specimen figured is forty-seven inches, of which eleven belong to the tail. The head measures about one inch and an eighth. Its upper surface is flattened; the inferior one subconvex, and the sides perpendicular. The eye is large and circular, and its diameter is comprised about six times in the length of the head. The snout is tapering, the upper jaw protruding considerably over the lower. The rostral plate is rather small, subcrescentic, convex anteriorly, and depressed upon its middle surface. It is obliquely situated at the inferior surface of the snout, showing but a very narrow edge in a view from above (fig. 2). The prefrontals are twice as long as broad upon the middle of their length; they belong exclusively to the upper surface of the head. The postfrontals are much larger than the latter, one-third longer upon their upper surface, and extend upon the sides of the head until they reach the upper labials. The vertical is elongated and slender, subtruncated anteriorly, and subacute posteriorly, engaging between the inner margins of the occipitals. The latter are as long as the vertical, but broader anteriorly; their external margin being defined by an undulating line. The superciliaries are a little longer than the postfrontals, subtriangular in shape; the summit of the triangle directed forwards. There is a long and narrow nasal, in which, and rather in advance of the middle of its length, the nostril opens subangular in shape. There is no loreal; but the lateral expansion of the postfrontals fills up the space between the nasal plate and a large anteorbital, much broader upwards than downwards, slightly visible in a view from above (fig. 2). Its anterior angle fits a notch in the posterior margin of the postfrontals, upon the line of demarcation between the sides and upper part of the head. The postorbitals are rather small, and three in number; two upon an anterior line, the lowermost being much the smallest of the two. A third, very small, is situated immediately behind the latter. Three large and subequal temporals terminate the series of cephalic plates and shields. The upper labials are nine in number; the posterior one being the longest and largest of all, and the anterior one the most slender. The fifth, sixth, and seventh constitute on the right side the inferior rim of the orbit, though the fifth and seventh only in part. On the left (fig. 3) there is one labial less. The lower labials are likewise nine in number; the fifth and sixth, situated beneath the eye, are the largest; the others diminishing gradually in size towards the anterior and posterior regions. The symphyseal or anterior odd lower labial is small, and rounded exteriorly. There are three pairs of elongated mental shields, the anterior pair reaching the margin of the jaw between the symphyseal and the first lower labial. The subgular scales are well developed and elongated.

The body is subcylindrical, much thinner anteriorly than posteriorly, the neck having about the thickness of the tail upon its anterior third. The scales are smooth, elongated, and acute posteriorly, constituting seventeen longitudinal rows upon the middle of the body, and twelve towards its posterior extremity. The external row, nearest to the abdominal scutellæ, is composed of the largest scales. The abdominal scutellæ, one hundred and ninety-five in number, are rather wide, convex upon their posterior margin; the posterior two are bifid. The tail is very slender, and tapering to a point; there are six rows of scales upon its anterior portion, near its origin; they are, moreover, broader and shorter than those on the body. The subcaudal scutellæ constitute a double row to nearly the tip of the tail, where scutellæ and scales assume a uniform aspect. One hundred and sixty-five pairs of the latter may distinctly be enumerated. Beyond that number verticils of scales surround the remaining portion of the tail.

Abd. sc. 193+2. Subc. sc. 165. Dors. rows 17 and 12. Total length, 47 inches; tail, 18 inches.

The coloration must be much altered by the action of the alcoholic liquor in which the specimen



is preserved. The upper surface and sides of heads are olivaceous brown, and the body and tail above purplish grey. Beneath and anteriorly the hue is of a soiled white, whilst posteriorly it is greyish yellow. The upper labials have the same hue as the lower surface of head. A black line may be traced along the upper margin of the upper labials, from the snout to about an inch and a half along the sides of the neck. Along the back and sides of the anterior part of the body there are oblique series of jet black elongated spots. The lower and inner margin of the scales is whitish, and apparent only when the skin is extended and the whole surface of the scales exposed. The posterior portion of the body is sparsely dotted with black; the tail is unicolor.

This species figured was collected on the island of Taboga, bay of Panama.

Plate XXXVI, fig. 1, represents *Dryophis vittatus*, of the size of life.

fig. 2, view of the head, seen from above.

fig. 3, side view of the head.

fig. 4, under view of the head.

fig. 5, vent and post-abdominal scutella.

fig. 6, a portion of the left side of the body, showing the form and number of longitudinal rows of scales.

FAMILY OF COLUBRIDÆ.

Genus TACHYMENIS, Wiegman.

GEN. CHAR. Body subcylindrical, of moderate length; tail short, subconical, tapering. Head colubrine slightly detached from the body. Cephalic plates normal. Eyes of medium size. One or two anteorbitals and two postorbitals. One loreal. Two nasals, with nostril between them. Jaws subequal. Dorsal scales smooth. Preanal scutella bifid. Subcaudal scutellæ all divided.

SYN. *Tachymenis*, WIEGM. in Nov. Act. Phys. Med. Acad. Nat. Cur. XVII. 1. 1835, 251.

OBS. The genus *Tachymenis* is, so far, composed of two species, one from Peru figured and described by Wiegmann in the work cited above, and another from Chile, described below.

TACHYMENIS CHILENSIS, Girard.

PLATE XXXVII, Figs. 1—6.

SPEC. CHAR. Two anteorbitals. Third and fourth labials constituting the inferior rim of the orbit. Dorsal scales in nineteen rows. Olivaceous brown above, with crossing lines of black. Beneath yellowish, with anterior margin of scutellæ black. Two postocular black vittæ.

SYN. *Coronella chilensis*, SCHL. Ess. Phys. Serp. Part. descr. 1800, 30.

GUICH. in Gay, Hist. de Chile, Zool. II, 1848, 79. Erpet. Plate iv, fig. 1, a, b, c, d.

Dipsas chilensis, DUM. Mém. Acad. des Sc. XXIII; 1853, 112.

DUM. & B. Erp. gén. VII. 1, 1854, 608.

Tachymenis chilensis, GRD. Proc. Acad. Nat. Sc. Philad. VII, 1854, 226.

GEN. REM. Of the three specimens that were collected, the one which is figured is the largest, and yet not fully grown. Though immature, we propose to describe them carefully, since the figure in the Historia de Chile is not as accurate as might be desired. We have seen upon specimens of others species, the zoological characters entirely developed when they bore the same relations towards their adult as those now before us.

DESCR. The head is subovoid, being depressed upon its upper surface; the snout is rounded, and the eye, subcircular in shape, is of moderate development, its diameter being equal to the width of the vertical plate upon the middle of its length. The vertical plate is large and subpentagonal, either slightly concave upon its sides or linear; its posterior extremity being moderately angular. The occipitals are a little shorter than the vertical, but anteriorly nearly as broad. The postfrontals are broader than long, extending but little to the sides of the head, being posteriorly rounded. The prefrontals are subtriangular, irregularly rounded off, and do not reach the nostrils. The rostral is subconical, concave beneath. The nostrils are small and subelliptical, situated between two plates the sutures of which are sometimes obliterated either above or below these apertures. The loreal is quadrangular and larger than either the post or prenasals, which have the same general shape. There are two anteorbitals; the uppermost is longer than high, and a little longer than the lower one, which is rather narrow and elongated; also two postorbitals nearly equal in size and similar in shape. The temporal shields, seven or eight in number, are so small and so much like the scales, that there are only two that may readily be distinguished from the latter by their shape. The upper labials are seven in number: the fifth being the largest, the sixth is the next in size, then the fourth, the third, and the second; the seventh is a little larger than the first, which is the smallest of all. The third and fourth constitute the inferior rim of the orbit; their suture being situated beneath the pupil. The symphyseal is triangular; the lower labials, being nine in number, diminish in size both forwards and backwards from the fifth, which is the largest of all; the seventh, eighth, and ninth are rather narrow and elongated, whilst the four anterior are higher than long. The first one in particular is nearly twice the height of the second, and separates entirely the symphyseal from the anterior mental shields, of which it assumes the general feature. There are two pairs of mental shields of about the same length, but the posterior pair is more slender and posteriorly subacute.

The body is subcylindrical, thickest upon its middle, tapering both posteriorly and anteriorly where a somewhat contracted neck separates it from the head. The tail is subconical, pointed posteriorly, rather short, constituting about the sixth part of the entire length. The scales are smooth, disposed upon nineteen longitudinal series; they are subacute posteriorly, and largest upon the external series, gradually diminishing hence to the central or dorsal series. On the nape and under the head they are the smallest. The abdominal region is rather narrow. There are one hundred and fifty-five abdominal scutellæ, the posterior one being bifid, and forty-three subcaudal scutellæ, all of which bifid.

Abd. sc. 154 + 1. Subc. sc. 43. Dors. rows 19. Total length 15 inches and $\frac{3}{10}$; tail $2\frac{1}{2}$ inches.

The ground-color appears now olivaceous brown above, yellowish beneath. The anterior margin of the abdominal scutellæ being jet black with a subtriangular blotch upon their middle region, and occasionally also upon their extremities, the lower surface of the body may assume quite a maculated appearance. The anterior margin of all the scales is black, but when in their normal and imbricated state, the black is not seen externally except upon the fourth and eight series on either side, thus constituting two pair of obsolete vittæ. The middle dorsal series exhibits likewise the black margin of its scales, though in a less conspicuous manner as the specimens grow to a larger size. In the very immature condition almost every scale shows its black edge, constituting irregular zigzag lines. The dorsal vittæ sometimes assume the appearance of a series of double crescents contiguous upon their convexity: this is owing to the fact of the black extending along the sides of the scales. The lateral vittæ, from the neck ascend to the occipital region of the head, the sides of which are marked by two narrow black stripes, the upper one slightly arched, extending from the posterior rim of the orbit to the angle of the mouth; the other runs obliquely from the lower rim of the orbit, across the fourth and fifth labials to the edge of the mouth.

This species was collected in the vicinity of Santiago, Chile.

Plate XXXVI, fig. 1, represents *Tachymenis chilensis*, size of life.

fig. 2, the head viewed from above.

fig. 3, a side view of same.

fig. 4, a view of its inferior surface.

fig. 5, exhibits the vent and post-abdominal scutella.

fig. 6, is a portion of the left side showing the form of the scales and the number of their series.

Figs. 2—5 are slightly magnified.

Genus TAENIOPHIS, Girard.

GEN. CHAR. Head depressed and detached from the body, which is slender and subcylindrical. Tail tapering to a point, and comparatively short. Cephalic plates normal. One anteorbital, and two postorbitals. An elongated, quadrangular loreal. Two nasals, nostril between them. Eyes above the medium size, situated above the fourth and fifth labials; pupil circular. Mouth deeply cleft. Scales smooth, disposed upon nineteen longitudinal series. Post-abdominal scutella bifid; subcaudal scutellæ all divided. Colors disposed upon uniform longitudinal bands.

SYN. *Taeniophis*, GRD. Proc. Acad. Nat. Sc. Philad. VII, 1854, 226.

OBS. This genus is closely related to *Diadophis*, and may be distinguished from it by the presence of one anteorbital plate only, a larger number of longitudinal rows of scales, and the distribution of its colors.

It includes, so far, two species, both of which are new to science. One, an inhabitant of Chile, is described below; the other (*T. imperialis*, B. & G.) is Mexican: a specimen in the Smithsonian museum having been found at Matamoras.

TAENIOPHIS TANTILLUS, Girard.

PLATE XXXVII, Figs. 7—12.

SPEC. CHAR. Body and tail very slender. Head elongated, and very distinct from the body. Eyes proportionally large. A deep chestnut-brown band along the dorsal region; light brown on the sides. Beneath greenish or yellowish grey. Upper labials yellowish-white. A superciliary yellowish file.

SYN. *Taeniophis tantillus*, GRD. Proc. Acad. Nat. Sc. Philad. VII, 1854, 227.

DESCR. The body is small, slender, and elongated; the tail conical and tapering, forming about the two sevenths of the total length. The head is small, well detached from the body by a contracted neck, depressed above, and declive upon the region anterior to the eye. The snout is obtuse. The eye is very large, and subcircular; its horizontal diameter being comprised once and a half across the ocular region of the head, embracing the vertical and superciliary plates; the pupil is circular. The nostrils are quite small, subcircular in shape, and situated between two nasal plates, though encroaching more upon the prenasal than upon the postnasal, which is slightly the largest of the two. The vertical plate is large, broadest anteriorly, rounded or subconvex upon its margin, subconcave upon the sides, and triangularly acute posteriorly. The occipital plates are larger than the vertical, and are externally rounded. The postfrontals are irregularly five-sided, and extend slightly to the sides of the head. The prefrontals are subtriangular, externally rounded. The rostral is broad but rather low, convex

upon its upper margin, and very concave below. The postnasal is slightly larger than the prenasal. The loreal is elongated and subtrapezoid. There is but one anteorbital, very narrow upon its lower portion, quite broad across the superciliary line, and extending to the upper surface of the head under the shape of a small triangle, the summit of which being contiguous to the lateral anterior edge of the vertical, thus preventing a contact between the postfrontals and the superciliaries. The latter are well developed, narrowest anteriorly. There are two postorbitals, the uppermost being twice the size of the lower. Two temporal shields only can be distinguished by their form from the occipital scales. The upper labials are eight in number, the fourth and fifth forming the inferior rim of the orbit; the fifth, sixth, and seventh are the largest; the fourth is a little larger than the eighth, the anterior three being the smallest. There are ten inferior labials, and a symphyseal, quite small and triangular. The first extends to the anterior pair of mental shields; the second and third are the smallest of the three; the fourth, seventh, eighth, ninth, and tenth are nearly equal; the sixth is the largest, and the fifth somewhat smaller than the sixth. The posterior pair of mental shields is more slender than the anterior pair, but nearly of the same length. The abdominal scutellæ are a hundred and ninety-five in number; the posterior is bifid. There are about a hundred and ten subcaudal scutellæ, all of which are subdivided. The scales are elongated and posteriorly subacute, smooth and disposed upon nineteen longitudinal series, the two outermost of which being the largest; the others diminishing slightly towards the dorsal region.

Abd. sc. 194+1. Subc. sc. 110. Dors. rows 19. Total length, 12 inches; tail, 3 inches and $\frac{3}{16}$.

The ground-color of the sides of the body is light brown, minutely dotted with black. On the back there is a band of deep chestnut-brown margined with black, covering three longitudinal rows of scales. The two adjoining rows are partly (internally) brown and partly (externally) black. Along the neck and anterior fourth of the body each scale of the external series, covered by the dark dorsal band, has a white spot upon its middle, thus interrupting the black border. Towards the posterior part of the body the dorsal brown band covers but three series of scales, the internal margin of the adjoining series being black. Along the tail, where that band may be traced tapering towards its top, the black margin has immersed into the brown. The inferior surface of the body is uniform greenish or yellowish grey. The upper surface of the head is dark brown. A yellowish white filet or stripe extends from the rostral plate, along the superciliary ridge, to the posterior extremity of the superciliary plates. A subelliptical spot of the same hue, but margined with black, may be seen on the upper part of the upper post-orbital plate, interrupting the vitta just alluded to, and which can be traced along the external edge of the occipital plate, more conspicuous, and margined with black. The vitta extends along the neck, and eventually immerses into the dorsal band. The sides of the head are brown, and of a deeper hue than the sides of the body; the upper labial plates being also yellowish-white. A vitta of that same hue may be traced from near the top of the jaw along the neck. The inferior labials, the mental shields, and the subgular scales, exhibit each a central light spot margined with black. Two light vittæ may be followed, one on the two external rows of scales, another along the edge of the abdominal scutellæ, from beneath the throat to a considerable length backwards. The hue of the sides of the head likewise tapers along the sides of the neck for about the same distance.

Specimens of this species were obtained from the vicinity of Santiago, Chile.

Plate XXXVII, fig. 7, represents *Taeniophis tantillus*, size of life.

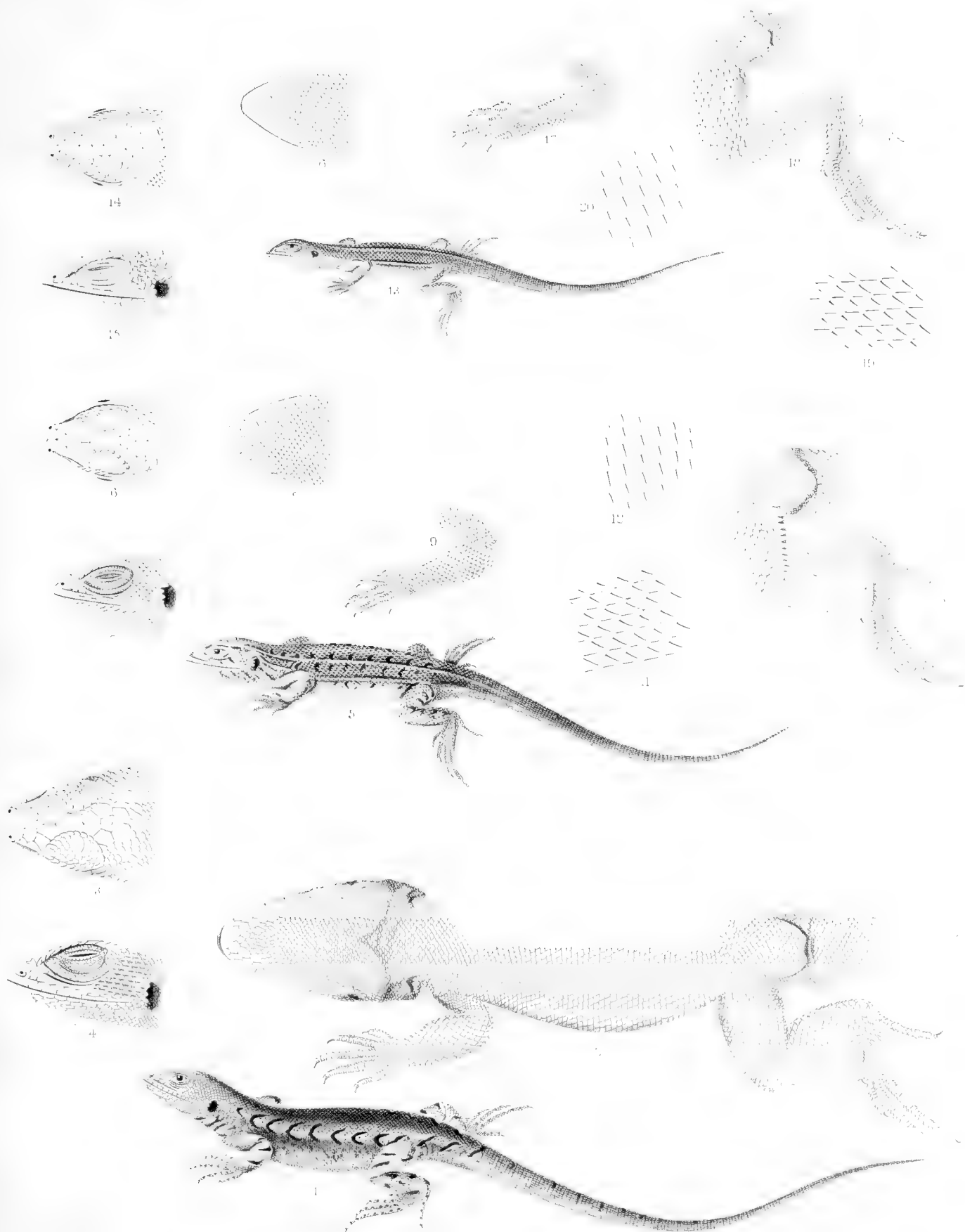
fig. 8, is the head, seen from above.

fig. 9, a side view of the head.

fig. 10, the head, seen from below.

fig. 11, exhibits the vent and post-abdominal scutella.

fig. 12, a portion of the left side of the body, showing the shape of the scales, their relative size, and disposition in series.



J.H.Richard.

Doris

Figs 1-4. PROCTOTRETUS TENUIS, Dum & Bibr. Figs 5-12. PROCTOTRETUS FEMORATUS, Grd. Figs 13-20. PROCTOTRETUS STANTONI, Grd.

SAURIA.

FAMILY OF STELLIONIDÆ.

Genus PROCTOTRETUS, Dum. & B.

GEN. CHAR. Body rounded or slightly depressed, covered with imbricated scales; the upper ones carinated, the inferior ones generally smooth; neither a dorsal nor a caudal crest; head subpyramido-quadrangular, more or less depressed; cephalic plates moderate, polygonal; occipital generally not very conspicuous; teeth on the palate; sides of neck either folded or smooth; no subgular fold; an ear opening; membrane of tympanum but little depressed; fingers simple; tail either long or conical, or moderate and slightly depressed; no femoral pores; anal pores in the males.

SYN. *Proctotretus*, DUM. & B. Erp. gén. IV, 1837, 266.

GUICH. in GAY, Hist. de Chile, Zool. II, 1848, 23.

PROCTOTRETUS TENUIS, Dum. an B.

PLATE XL, Figs. 1—4.

SPEC. CHAR. Cephalic plates usually smooth, occasionally covered with very minute granules. Auricular aperture large; its anterior margin subtubercular. One series of supralabials. Temporal plates irregularly rounded, subimbricated, subtuberculous, and of moderate development. Sides of neck folded and granular. Dorsal scales small, carinated, and posteriorly obtuse; lateral scales smaller, not imbricated, provided with a rudimentary carina; abdominal scutellæ smooth and mostly entire. Posterior surface of thighs minutely granular. Tail long and slender. Brownish-black, with transverse subcrescentic black bands.

SYN. *Proctotretus tenuis*, DUM. & B. Erp. gén. IV, 1837, 279.

BELL, Zool. of the Beagle, V, Rept. 1843, 7, Plate iii, fig. 2.

GUICH. in GAY, Hist. Chile, II, 1848, 32, Erp. Plate i, fig. 1.

HOMER. and JACQ. Voy. au Pole Sud et dans l'Océanie, Plate ii, fig. 2.

DESCR. The form, although slender in its general aspect, is less a characteristic of this species than it really is for several others of its congenere. The body is depressed; swollen upon its middle region; the limbs being of moderate development. The anterior, when stretched alongside the body, are far from attaining the groins; and the tip of the longest toe of the posterior, when the latter are brought forwards, reaches the middle region of the neck. The tail is elongated, conical, tapering to a point, and nearly twice as long as the body and head together.

The tongue is large and fleshy; elongated in shape and depressed, subanceolated, occupying the entire space between the two branches of the lower jaw. The teeth are of moderate development, smallest anteriorly, and subcylindrical; whilst posteriorly these are somewhat flattened, or else stouter upon their base.

The head is depressed, subtriangular in a view from above, and rounded upon the snout. The plates which cover its surface are generally smooth, but exhibit sometimes a very minute granulation, apparent only through a magnifying glass. The cephalic plates vary as regards both their size and number, being smallest when most numerous. In the specimen figured, there are three pairs of frontals: one pair of post-occipitals, an odd occipital, a vertical, and an odd frontal, which are somewhat larger than the rest, and nearly equal among themselves. An inner series of surocularies may be noticed as the next in size; they are separated from

the vertical or interocular, and the occipitals, by a concentric series of small plates. There is but one and a rather small nasal, in the midst of which the nostril opens, leaving but a narrow rim. The loreal region is occupied by several small plates. The anterior suborbitals are more developed than the posterior, all of which being provided with a keel along their inner margin. The surciliary ridge is composed of about six elongated, narrow, and obliquely superposed plates. The lids are covered with very small plates, the marginal series being somewhat more developed than the rest, except on the periphery of these organs, and yet may still be distinguished from the latter by their regular shape and disposition. The rostral is transversally elongated and very low. The upper labials are very elongated and very narrow, six or seven in number, increasing in length from the first to the fourth inclusive, then diminish considerably backwards. The supralabials have the same general appearance as the labials themselves, save in being a little smaller. Occasionally two or more minute plates may be observed upon the loreal region between the loreal plates proper and the supralabials. The temporal plates are of moderate development, and of nearly equal size with the post-occipitals. They are irregularly rounded, slightly imbricated, and provided either with a rudimentary tubercle or an obsolete carina. The symphyseal is larger than the rostral, and especially broader upon its middle region. The inferior labials (five or six in number) are broader than the upper, more conspicuous therefore, and diminishing gradually backwards. There are four or five pairs of mental shields: the anterior pair being the largest and contiguous upon their inner margin, whilst the other pairs diverge, and gradually diminish in size backwards. Between the mental shields and lower labial plates there exists a complete series, and part of a second, of small infralabials. The inferior surface of the head, the throat, the belly, the pre-anal region, thighs, and legs, are covered with smooth, posteriorly obtuse, and generally entire scales or scutellæ of moderate development, a little smaller under the head and larger under the hind limbs; some few on the sides of the belly exhibiting a small notch posteriorly. The sides of the neck, the insertion of the limbs, the inferior surface of the forearm, and the posterior surface of the thighs, are granular. On the sides of the abdomen the scales are irregularly rounded, subtuberculous, or subcarinated, and smaller than those on the dorsal region, which are distinctly, though moderately, carinated, and posteriorly obtuse. The upper surface of the limbs and the inferior surface of the arm are covered with scales similar in shape and structure to those on the back; on the palm of the hands and the sole of the feet they are much smaller, acute posteriorly, and distinctly carinated; around the fingers and toes they constitute irregular verticilles—the superior ones being more irregular in size than the inferior, and less distinctly carinated. The inner or first finger is the smallest; the outermost is the next in length; then the second; then the third, which is nearly as long as the fourth, which is the longest. The nails are rather short, compressed, acerated upon their extremity, and gently curved. The first toe is the smallest; the second is the next in length; then the fifth; then the third; the fourth is the longest. Their nails do not differ materially from those of the fingers. The scales which cover the tail are the most conspicuous of all; they constitute oblique series upon the base of that organ, and annular rows further backwards. The oblique series have the same shape as those of the back. Those constituting the annular rows are superiorly subquadrangular and elongated, with their carina oblique; whilst beneath, they become much narrower, posteriorly acute, with a straight carina along their middle region.

The ground-color is blackish brown in the male, and greenish brown in the female; in either sex there are two parallel series of transverse black bands, convex anteriorly, margined with a whitish, or else a lighter tint along their concavity. These bands, however, are more conspicuous in the female than in the male. They may be traced from the head, on each side of the dorsal region, to the posterior extremity of the body, where the series, from either side, combine more or less into one, which extends along the upper surface of the tail. The limbs, as well as the tail, are transversally barred with black. In the female, the dorsal region and the flanks are either dotted with black or spotted with whitish; whilst in the male, these spots

are either bluish, reddish, or else of a metallic green, especially on the neck. The upper surface and sides of the head are spotted with different shades of black, or dotted with yellow and black. The occipital region and the back, in the male, occasionally exhibit sinuating black lines upon a brownish ground, which itself bears bluish, greenish, or slate-colored spots. Beneath, the ground-color is whitish, vermiculated, maculated or clouded with greyish lines, spots, or dots. That region sometimes is unicolor in the female.

This species appears to be quite abundant in the vicinity of Santiago, Chile, whence numerous specimens were obtained and preserved.

Plate XXXVIII, fig. 1, represents a profile view of the female sex of *Proctotretus tenuis*, size of life.

fig. 2, is an under view, showing the structure of that region.

fig. 3, is an upper view of the head.

fig. 4, a side view of the head.

Figs. 2, 3, and 4, are slightly magnified.

PROCTOTRETUS FEMORATUS, Girard.

PLATE XL, Figs. 5—12.

SPEC. CHAR. Cephalic plates rugose. Auricular aperture moderate, provided with an arched plate upon its supero-anterior margin, and one or two conical scales beneath and upon the same anterior margin. One series of supralabials. Temporal shields well developed, imbricated and carinated. Sides of neck with but one inconspicuous fold, and covered with small carinated scales. Dorsal scales large, carinated, posteriorly acute, and diminishing in size towards the sides. Abdominal scutellæ smooth and entire. Posterior surface of thighs granular. Tail elongated and slender. Brownish, with two parallel light vittæ on either side, and two series of black spots. Abdomen whitish, unicolor; inferior surface of head with greyish, irregularly broken lines.

SYN. *Proctotretus femoratus*, GRD. Proc. Acad. Nat. Sc. Philad. VII, 1854, 227.

DESCR. This species has the same slender aspect as *P. tenuis*, the limbs and tail being developed nearly in the same proportions. The body, mayhap, is a little shorter, and more slender still. The tongue and teeth present the same general shape and structure. The head is depressed, and quite declive from the frontal region towards the snout. Viewed from above, it is subtriangular, subtruncated anteriorly. The cephalic plates are of moderate development; exhibiting upon their surface sinuating, subtubercular ridges, which give to that region a rugose appearance. The vertical, a pair of post-occipitals, and two pairs of postfrontals may be distinguished, amid their number, as the largest. Three postinternal surocularies hold the same relations towards their analogues as the former; a concentric chain being observed upon the inner margin of the surface of the upper lid. The perforation of the nostrils takes place through one single plate more towards its posterior or inferior edge than the anterior. The loreal region being considerably reduced by the declivity of the frontal region, there are but one or two loreal plates. The suborbital chain is composed of three narrow and elongated plates, provided internally with a conspicuous and sharp ridge or crest; the longest occupying the inferior rim of the orbit and the other two its anterior rim; whilst the posterior rim is formed by the anterior temporal plates. The surciliary ridge is composed of five or six obliquely superposed plates, smallest posteriorly. The surface of the lids is granular; their margins being provided with a series of very small plates. The rostral is transversally elongated and

very low. The upper labials are elongated and narrow, six in number, increasing in size from the first to the fourth, which is the longest, then diminishing again posteriorly. The supra-labial series is composed of about an equal number of similar plates but narrower still. The symphyseal is larger than the rostral, and especially broader upon its middle region. The inferior labials, six or seven in number, are broader than the upper, diminishing gradually backwards. There are four pairs of mental shields; the anterior pair is the largest, contiguous upon the inner margins, whilst the other pairs diverge in diminishing in size posteriorly. A series of infra-labials may be traced from the angle of the mouth to between a portion of the first inferior labial plate and anterior mental shield. The temporal plates are well developed, particularly towards the upper region; they are posteriorly obtuse, imbricated, and distinctly carinated. The side of the neck, which exhibits a very obsolete fold, is covered with small, acute, and carinated scales. The posterior margin of the auricular aperture and region of the shoulder are minutely granular. The dorsal scales are rather large upon the back, diminishing in size towards the middle of the flank, being carinated and acute posteriorly. The inferior half of the flanks are covered with scales or scutellæ similar to those which exist upon the belly, being only a little smaller and obsoletely carinated upwards. The abdominal scutellæ or scales are smooth, obtuse posteriorly, and rather smaller than the dorsal scales. Under the head and throat they do not differ materially from those on the abdomen, but are a little larger under the head than under the throat: their posterior margin is entire. If an obsolete notch is to be observed at all, it is in those occupying the flanks, but that notch may be owing to the fact that the carinæ do not always extend to the posterior margin. The upper surface of the anterior limbs is covered with scales similar to, but smaller than those on the back, obtuse and smooth upon the anterior region and the carpus. Under the forearm they are very small and smooth, increasing in size under the arm, and again diminishing towards the palm of the hand, which is entirely covered with them, and not only carinated and posteriorly acerated, but provided also with a lateral acute processus, particularly developed upon the metacarpal region. The fingers above are plated and smooth; beneath they are provided with small scales, carinated, acerated posteriorly and disposed upon regular transverse rows. The fingers have the same relative length, and the nails the same form as in *P. tenuis*. The hind limbs and the tarsi are covered above with scales similar, but smaller than those on the back, and larger than on the fore limbs, carinated even on the tarsi. The anterior tibio-metatarsal region is distinguished by very small scales, almost passing to the granular aspect. The posterior surface of the thighs is granular; whilst their inferior surface is covered anteriorly with scutellæ similar to those of the abdomen, and posteriorly with three or four series of scales, somewhat acute and projecting beyond the surface of that organ, the external series being the most developed. On the inferior surface of the femoral region the scutellæ or scales are subcarinated and well developed, the external series projecting a little beyond the surface of the organ. On the sole of the feet the scales are quite small, acute, and more distinctly carinated. The toes are surrounded with small subverticillated scales, more uniform and more distinctly carinated beneath than above. The proportional length of the toes and the form of the nails is the same as in *P. tenuis*. The caudal scales have likewise the same general structure; there being, however, no contrast in size between them and those of the back, though a little larger on the base of that organ. The ground-color is brown, olivaceous, or blackish. The upper surface of the head is either unicolor or dotted with blackish; its sides generally exhibit two or three oblique and black lines extending from beneath the orbit towards either the margin or the angle of the mouth. The suborbital ridge may be black also. There are two parallel light vittæ on the sides of the body, the uppermost extending from the surciliary ridge to a portion of the tail; the lower one extends from the temporal region across the upper edge of the auricular aperture, and above the insertion of fore limbs to the groin. The dorsal region sometimes is lighter than the sides, and appears like another broad vitta. There are two series of black, transversally elongated spots, with a light or bluish margin; the intermediate space

being dark brown. The first series stretches immediately along the inner margin of the upper vitta; the second is enclosed between the two vittæ. The lower half of the flanks, beneath the inferior vitta, is covered with irregularly vertical or rounded black spots. The inferior surface of the body is unicolor whitish or greyish; numerous interrupted series of linear spots are observed under the head and inferior portion of its sides. The vittæ upon the latter regions are margined with black. There is an irregular black spot at the shoulder close to the insertion of the fore limbs. The series of dorsal spots extends along the upper surface and sides of the tail; the latter is maculated with greyish below. The limbs above are transversally barred, and beneath they are of the same hue as the abdomen.

In some, probably male specimens, the vittæ and spots are less distinct, and immerge into the ground-color. The sides of the abdomen are of a reddish metallic hue, with black and bluish small spots.

Specimens of this species were collected in the vicinity of Santiago, Chile.

Plate XXXVIII, fig. 5, represents the profile of *Proctotretus femoratus*, size of life.

fig. 6, is the head, seen from above.

fig. 7, a side view of the head.

fig. 8, the head, from below.

fig. 9, shows the inferior surface of the anterior limb.

fig. 10, the inferior surface of the posterior limb and the vent also.

fig. 11, some dorsal scales.

fig. 12, some abdominal scutellæ.

Figs. 6—12 are slightly magnified, in order to show readily the structures they are intended to represent.

PROCTOTRETUS STANTONI, Girard.

PLATE XL, Figs. 13—20.

SPEC. CHAR. Cephalic plates rugose. Auricular aperture moderate, margined anteriorly with very small scales, one of which is larger than the rest. One series of supralabials. Temporal shields well developed, subrounded, imbricated, and carinated. Sides of neck with one indistinct fold, and covered with acute and carinated scales, a little smaller than those of the back, which are large, posteriorly subacute, and strongly carinated. Abdominal scutellæ rounded posteriorly and slightly carinated. Posterior surface of thighs granular. Tail elongated and slender. Ground-color deep brown, with a reddish tint posteriorly; two parallel vittæ on the sides. Abdomen unicolor, with metallic reflections.

SYN. *Proctotretus stantoni*, GRD. Proc. Acad. Nat. Sc. Philad. VII, 1854, 227.

DESCR. The specimen figured—the only one in our possession—is of a rather small size, and, in all likelihood, not fully grown. It resembles, in general appearance, *P. gracilis*, particularly in its system of coloration, differing, however, in too many peculiarities of structure to dwell at all upon that external resemblance.

The head is very depressed and sloping upon the frontal distance. Seen from above, its shape is subovoid, rather narrow anteriorly. The cephalic plates, the surface of which is slightly rugose, are well developed, and the frontals symmetrically arranged; thus we find two pairs of small prefrontals and three pairs of considerably larger postfrontals, separated by a transverse series of three plates, the middle one of which is much larger than the adjoining two, though itself equal to the smallest postfrontals. There is a vertical of medium size, a

small, odd occipital, on each side of which, and immediately in advance of a large pair of post-occipitals, is seen a pair of small plates. Two more pairs, equal in size to the last, may be observed on either side of the large post-occipitals, and finally, behind the latter a series or two of quite small plates, limiting the occipital region. The nostrils open in one single plate; there are three lorals, one forming the continuation of the surciliary ridge, above which and the nasal, between these and the frontals, there are four minute, elongated plates irregularly disposed. The surciliary ridge is composed of six obliquely superposed laminae. The surocularies are nearly as large as the prefrontals, and surrounded by a series of small plates. The suborbital series consists of two plates only, a very long one beneath the orbit, and another rather small anteriorly, their inner crest or ridge being well marked. The posterior rim of the orbit is margined by small plates alike the temporal group. The surface of the lids is minutely granular; their margin is provided with a double series of very narrow, elongated, and very small plates. The rostral is transversally elongated, but quite low, or else narrow. The upper labials, five in number, are very narrow and elongated, increasing in length from the first to the fourth inclusive; the fifth is equal to the first. The supralabials are very exiguous; the middle ones being the longest. The symphyseal is larger than the rostral. The inferior labials, four in number, gradually lose their width posteriorly; the third is the longest; the fourth is the smallest of all. There are five pairs of mental shields, diminishing in size posteriorly; the shields of the anterior pair being contiguous upon their inner margin. Between the inferior labials and the mentals a triple series of elongated scutellæ or shields may be observed, one series only extending to the posterior half of the anterior inferior labial and anterior mental shield. The temporal shields are well developed, slightly imbricated, rounded posteriorly, and carinated. The neck exhibits but a slight loose elevation of the skin, and is protected by acute and carinated scales, somewhat smaller than those of the back and sides. A small space immediately behind the ear is granular, though not as minutely as about the axillæ.

The dorsal scales are large, subrhomboid, subacute posteriorly, and strongly carinated; they are smaller upon the neck, and diminish gradually in size towards the sides of the body and along the tail, where they constitute longitudinal series, instead of being arranged in verticiles or else concentrically. Upon the origin of tail their posterior margin is rounded and subacute; farther behind they gradually elongate, and the carina, instead of occupying the middle line of the scale, becomes oblique. Along the inferior surface of that organ they are more uniform and more slender.

The limbs are very slender, and, when stretched alongside with the body, the anterior do not reach the setting on of the thighs, and the posterior the ear opening, in which respects, as in many others, this species may be distinguished from *P. gracilis*. The upper surface of these organs, from their origin to the tip of the fingers, is covered with carinated scales, similar in shape, though a little smaller than those of the sides of the back. They are plate-like on the upper surface of the fingers, and obsoletely carinated. On the palm of the hands and sole of the feet they are the smallest of all, except on the inferior surface of the arm and the anterior tibio-metatarsal region, where they approximate the granular aspect of the posterior surface of the thighs.

The inferior surface of the head, neck, and abdomen, is covered with uniform scutellæ, somewhat smaller under the neck, and likewise diminishing in size towards the sides of the abdomen. The average size of these scutellæ is smaller than the dorsal scales. Their posterior margin is rounded, and their surface slightly carinated from the chin to the preanal region, on the margin of which there are very small plates. The postanal region is granulated like the posterior surface of the thighs.

The ground-color is uniform deep brown, with a reddish tint from the posterior third of the body to half the length of the tail. The sides bear two parallel light vittæ, the uppermost extending from the occiput to the base of the tail, the other from the auditive aperture to the setting on of the hind legs. The inferior surface is unicolor, whitish or yellowish, with a me-

tallic tint of purplish under the head, greenish under the chest, and coppery under the belly and tail.

Collected near Santiago, Chile, where the species must be scarce, judging of it by the fact that only one specimen was found amongst the numerous of the other species.

Plate XXXVIII, fig. 13, represents *Proctotretus stantoni*, in profile and of the size of life.

fig. 14, the head seen from above.

fig. 15, side view of the head.

fig. 16, under view of the head.

fig. 17, anterior limb from beneath.

fig. 18, posterior limb from beneath.

fig. 19, dorsal scales.

fig. 20, abdominal scutellæ.

Figs. 14—20 are slightly magnified.

We would not have concluded the history of the new members thus added to the "Fauna of Chile," by the exertions of the United States Naval Astronomical Expedition, without inscribing the name of one who was its father and its promoter, Hon. Fred. P. Stanton, of Tennessee. Science owes a debt of gratitude to all the enlightened men, who, by the position they hold in the councils of nations, declare themselves the patrons of scientific researches.

FAMILY OF LACERTIDÆ.

Genus APOROMERA, DUM. & B.

GEN. CHAR. Base of tongue not sheathed, bifurcated upon its extremity, covered with sub-rhomboid and subimbricated papillæ. Teeth on the palate. Intermaxillary teeth conical and simple. Maxillary teeth compressed, apart, acute, and curved; the anterior ones simple, the following notched at the summit of their anterior margin. Perforation of nostrils from behind forwards, situated on the sides of the snout, near its extremity and between three or four plates. Eyelids present. A tympanic membrane stretched inside the auditive orifice. Transverse and simple folds under the neck. Ventral scutellæ small, quadrilateral, smooth, and disposed alternatively. No femoral pores. Hands terminated each by five, a little compressed, fingers, not carinated beneath. Five toes, with internal edge tubercular. Tail cyclo-tetragonal.

SYN. *Aporomera*; DUM. & B., Erp. gén. V. 1839, 69.

GUICH. in GAY, Hist. de Chile, Zool. II, 1848, 58.

OBS. This genus embraces, as yet, but two species, both South American.

APOROMERA ORNATA, Dum. & B.

PLATE XXXIX, Figs. 1—4.

SPEC. CHAR. Cephalic plates subconvex and smooth. Auricular orifice subrescentic, convex posteriorly and folded upon the latter margin. A double series of supralabial plates. Temporal shields small, polygonal, and rugose. Sides of neck folded and covered with small

subcircular scales. Dorsal scales subangular and moderate in size. Abdominal scutellæ quadrangulately elongated, disposed upon transverse series, and smooth. Tail longer than the body and head together. Above olivaceous, with four rows of black spots margined with white. Beneath yellowish white, spotted with black.

SYN. *Aporomera ornata*, DUM. & B. Erp. gén. V, 1839, 76.

GUICH. in GAY, Hist. de Chile, Zool. II, 1848, 58, Plate iii, fig. 1.

Ameiva oculata, D'ORB. Voy. Amér. mérid. Rept. Plate v, figs. 6—9.

OBS. Finding that the iconography of this species might be considerably improved, under the circumstances, we have thought that such an opportunity ought not be allowed to pass without avail. The figures detailing its external structures are such as will throw a considerable light upon what is already known of that animal by those given in *Gay's Historia de Chile*, which, when compared to ours, cannot but attract the attention of herpetologists, as exhibiting some dissimilarities in the plates which protect the head.

DESCR. The latter is subquadrangular or rather subconical, flattened upon its upper surface, and more or less swollen upon the temporal regions. The vertical plate is irregularly six-sided and broadest anteriorly. The occipitals are very numerous, most of them small and polygonal, irregularly disposed, save eight of them, occupying the middle of said region immediately behind the vertical. The foremost is very small and odd, situated in a notch of the posterior margin of the vertical. On its sides but a little behind, and obliquely disposed, are two larger plates as one pair. Immediately behind these first three, the largest of the occipitals may be observed, elongated, irregular, varying in shape, almost as large as the vertical, and having on either side a smaller plate as a second pair, exteriorly and behind which is a third pair still smaller. On some specimens two or three other pairs are observed, scarce larger than those covering the rest of the occipital region, and constituting two parallel series posteriorly to the third pair above mentioned. On the frontal region the plates are small and numerous, varying in absolute number as well as in form, and disposed without any marked regularity, save a somewhat concentric arrangement amongst the external ones; but this may not be constant in all the specimens. The rostral is broad and low, six-sided, the three upper sides concave or subconcave, the uppermost sometimes so small as to give to that plate a conico-pentagonal shape. There are three or four—one or two anterior, and two posterior—nasals. Between the nasals and the rostral is situated a conspicuous phrenic plate, exhibiting a large portion of its surface in an upper view of the head. The posterior prenasal (or prenasals) forms an oblique arch from the first upper labial to the upper portion of the nostril. The postnasals are the smallest, subquadrangular in shape, placed one above the other so as to limit equally the posterior edge of the nostrils, which is large and approximates the labials. The loreal region is occupied by three rather large plates, much higher than broad, and increasing in size from forwards backwards. The inferior orbitals, nine or ten in number, form a continuous chain from the postero-inferior part of the eye to the surciliaries, increasing in size from backwards forwards, and provided with a carina from about beneath the pupil anteriorly. Thirteen or fourteen surciliaries constitute the upper edge of the orbit; these plates are small, subequal in size, a little larger anteriorly than posteriorly, and transversely elongated upon the middle of the chain. The upper and lower lids are densely covered with a pavement of irregular and small plates, disposed in series next to the inferior orbitals, where they are somewhat larger as well as anteriorly. Upon the edge of the lids they are likewise disposed in series, but not otherwise different from those on the middle region of these organs. Upon the upper lid they assume a granular aspect owing to their much reduced size. There are from five to seven suprocular plates transversely elongated, the middle one being the largest, and surrounded with small plates constituting one single series upon the region adjoining the vertex, and a double series exteriorly where these plates are the smallest of the group. The upper labials,



eleven or twelve in number, are of medium development, decreasing gradually in size posteriorly. The inferior labials, with nearly the same size, form, structure, and number as the upper, extend posteriorly to the same distance, which corresponds to a vertical line which would fall back of the eye. There is one row of small supralabials, largest anteriorly, extending from behind the first labial and beneath the nostril, to beneath the posterior half of the orbit. A second row may be traced from the second loreal to the third or fourth suborbitals; and above there are a few more, as an indication, mayhap, of a third row, at all events very obsolete. The symphyseal is transversely elongated and obtusely angular upon the line of its contact with the labials and mental shields. There are four pairs of mental shields and an odd anterior one. The posterior pair is the smallest; the next to it or third pair is the largest in some specimens, whilst in others it is the second which has the pre-eminence in that respect. The odd plate is generally equal in size to those of the largest pair. The first, second, and anterior portion of the third pair come into close contact upon their inner margin, leaving no space for smaller plates to intervene. On the lower half of the temporal region, the plate or scales, whatever called, are quite small, and very minute on the upper half. On the sides of the neck which is folded, behind the ear opening and beneath it, they assume a granular aspect; they increase somewhat in size below, being uniform under the throat and subgular folds, which are considerably developed. They are large upon an area back of the mental shields, between which and the inferior labials a series of them intervene; also sensibly larger upon the middle and posterior part of the nuchal region.

The dorsal scales are uniform, moderate in size, and subcircular, disposed upon transverse irregular series from the head to the origin of tail, diminishing in size and uniformity towards the lower portion of the flanks. About the insertion of the limbs, and upon the thoracic region behind the arm, their appearance is granular.

The limbs are stoutish and well proportioned; the fore might be termed rather short, inasmuch as they do not extend much beyond the middle region of the body when stretched along its sides. But the apparent shortness of these limbs in that respect is owing to the fact that the body in this genus is proportionally much more elongated than in *Proctotretus*. The scales on the upper surface of the forearm and arm are larger than on the body; on the arm and carpus they assume the shape of scutellæ or plates, one row of which, transversely elongated, may be traced to the tips of the fingers. On the lower surface and palm of the hand they are again granular. There is a row of plates at the base of the metacarpus. The three external fingers are provided beneath with a double row of tuberculous plates, the two others with but one row, and all of them laterally with a series of small plates. The inner finger is the shortest, the external is the next in size, then the second; the third and fourth are equal in length. The nails are strong, of moderate development, compressed, acerated anteriorly, and curved: the plate, the upper and the lower, situated at their base, is the most developed of the digital series. On the upper surface of the hind legs and external half of the foot, the scales are nearly of the size of those on the back; the posterior surface is granular, as well as the sole of the foot, whilst the inferior surface and inner half of the foot are covered with scutellæ, larger under the tibial than under the femoral region; smallest on the foot. The toes are protected above with a series of transversally elongated and irregular scutellæ, and beneath with a series of tubercular plates. Their inner sides are granular, whilst on the outer sides the scutellæ of their upper surface meet the plates of the lower. The abdominal scutellæ are well developed, elongated, irregularly subquadrangular, and disposed upon transverse series. On the anterior portion of the chest these scutellæ are quite small, and irregularly disposed in advance of the arms. They diminish, likewise, in size towards the posterior region of the abdomen, preserving, however, their disposition upon transverse series. The preanal scutellæ are very irregular in their form, of moderate development, the central being the largest. The anal folds are granular. The tail is very long, sub or cyclo-tetragonal, tapering to a point, and covered with circular rows of elongated scales, increasing in size from the base

of that organ to the last fifth of its length. They are smooth upon the anterior fifth, hence to the tip conspicuously carinated, particularly upon the middle region; at the base of the tail the scales are but slightly larger than on the posterior portion of the body; they are smooth everywhere else except, as mentioned, upon the tail. The carination is gradually appearing under the shape of a blunt and small protuberance which may be seen upon the posterior extremity of the scales. Every other or every third row subdivides as it ascends from the sides of the tail towards its upper surface, from the base to about the third of the length, the subdivision gradually diminishing in extent until reduced to a few scales upon the middle of the upper region; hence backwards they constitute regular annular rows. The ground-color is olivaceous, varying in shade. From the occipital region to the base of the tail there are four longitudinal series of rather large black patches. The latter are subcircular or subquadrangular, transversally elongated, and provided laterally with a white line or spots, exteriorly again margined with a black file; sometimes the black and central part of the blotch is wanting, in which case we have two independent white subrounded spots, margined with black. The occipital region is maculated with black. The inferior region of the flanks is vermiculated or spotted with brownish black, upon a whitish ground. The upper surface of the anterior limbs exhibits confluent lines or spots—some brownish, others whitish; the posterior limbs are maculated or else vermiculated with blackish. The upper surface of the tail presents intermingled black, brown, and olivaceous spots of various shades. The inferior regions are white; the throat, the belly, the thighs, and base of the tail are spotted with blackish brown.

Collected in the neighborhood of Santiago, Chile.

It is worthy of remark that *Ameiva oculata*, mentioned by d'Orbigny in his Travels to South America, was erroneously introduced in that work. The specimen from which his figure is made, is one of those collected by Claude Gay, in Chile, supposed for a time by the naturalists of the Garden of Plants in Paris to have been brought home by Alcide d'Orbigny, whose collections were deposited in that establishment, where Claude Gay had likewise sent his.

The shapes of the dorsal black spots, as described above, agree in the two specimens brought home by Lieut. Gilliss. They are at variance with those described and figured by Claude Gay.

Plate XXXIX, fig. 1, represents *Aporomera ornata*, in profile and size of life.

fig. 2, is an under view of the same specimen.

fig. 3, the head seen from above.

fig. 4, a side view of the head.

Genus CNEMIDOPHORUS, Wagl.

GEN. CHAR. Base of tongue not sheathed, moderately long, divided upon its anterior extremity into two smooth filets, covered with scaly, rhomboid, and subimbricated papillæ. Palate toothed. Intermaxillary teeth conical and simple; maxillary teeth compressed; the anterior simple; the posterior tricuspid. External opening of nostrils situated either exclusively in a single naso-rostral plate, or between several nasals. Eyelids present. Tympanic membrane distinct, stretched inside the rim of the auditive aperture; a double transversal fold under the neck. Ventral scutellæ quadrilateral, flat, smooth, not, or little imbricated, disposed in alternate rows. Large scutellæ-like plates under the legs. Femoral pores present. Five fingers a little compressed, not carinated beneath. Five toes similar in structure to the fingers. Tail cyclo-tetragonal.

SYN. *Cnemidophorus*, WAGL. Nat. Syst. Amph. 1830, 154.

DUM. & BIBR. Erp. Gén. V, 1839, 123.



Obs. The species of this genus may be arranged into two groups, according to the number of longitudinal series of abdominal scutellæ, some having eight, the others ten of such series: the species described below belonging to the latter group.

CNEMIDOPHORUS PRÆSIGNIS, B. & G.

PLATE XXXVIII, Figs. 1—5.

SPEC. CHAR. Abdominal scutellæ disposed upon ten longitudinal rows; dorsal scales very minute. Postsubgular fold provided with small plates upon its edge. Ground-color greenish, blotched with black, and exhibiting laterally two narrow, light vittæ.

SYN. *Cnemidophorus præsignis*, B. & G. Proc. Acad. Nat. Sc. Philad. VI, 1852, 129.

DESCR. The head, which is contained twice and three-fourths of a time in the combined length of the neck and body, is subpyramidal in shape, slightly arched upon the occiput. The plates which cover its upper surface are well developed. The vertical is hexagonal, broadest anteriorly; it is preceded by a pair of postfrontals, narrowest upon the line of their junction, dilated exteriorly and rounded upon the latter margin. A large and unique prefrontal occupies nearly the whole width of the snout, being irregularly octagonal in its outline, touching posteriorly the postfrontals, exteriorly the loreal and postnasal, and anteriorly the prenasals. The rostral occupies the entire width of the snout, advancing in a conical form towards the prefrontal, which, however, it does not reach. The prenasal is elongated and subquadrangular, being slightly curved backwards owing to its oblique situation on the sides of the snout, extending from the margins of the labials to the upper surface of the snout, where it meets its fellow from the opposite side, separating entirely the rostral from the prefrontal. The postnasal is not quite as high, though a little broader than the prenasal. It is anteriorly subconvex, and posteriorly concave, exhibiting a portion of its surface in an upper view of the head. The nostrils are large, situated at the inferior margin of the nasal plates, close to the labials, encroaching more upon the prenasal than upon the postnasal. The loreal is very large, its convex anterior margin fitting the concave one of the postnasal. It is broadest anteriorly, and three-sided, offering points of contact to a surciliary and two anteorbitals, the lowermost being the largest, angular, and five-sided, whilst the upper one is elongated and narrow. There are two suborbitals, the anterior being twice as large as the posterior one. The postorbitals are numerous, small, and polygonal. Four surocularies and six surciliaries constitute the upper roof of the eye, the surciliaries forming a prominent ridge, between which and the surocularies a series of small scales may be observed, extending from the anterior margin of the second suroculary and posterior margin of the second surciliary backwards, enclosing the posterior outline of the surocularies half way between the third of the latter group and the anterior occipitals. The anterior three surciliaries are much longer than the posterior three. The eyelids, upper and lower, are densely covered with small scales, the largest of which constituting a row along the inner margin of the orbitals. On the edge of the lids is another series more conspicuous than upon the intervening space. The middle surface of the lower eyelid is provided with a horizontal series of five or six quadrangular plates; the latter being higher than long. The occipitals are seven in number, the anterior two being somewhat larger than the others, broadest upon their posterior half, and in contact anteriorly with the vertical. The posterior five are disposed upon a sublinear and transverse row, the central one being placed immediately behind the middle line of the anterior two; the adjoining two, the largest of the five, are in contact anteriorly with the first pair of occipitals; the exterior two occupy a somewhat retreated situation along the external margin of the internal pair. An area of small plates surrounds posteriorly and exteriorly the postoccipitals. From the posterior extremity of the surciliary ridge to the upper mar-

gin of the auditive aperture may be seen a series of small polygonal plates, a continuation of the postorbitals. There are six upper labials; the two middle ones are much the largest, and longer than high. The anterior two are subquadrangular; the posterior two elongated, narrow, subtriangular; the last of the series is very small, with its acutest angle directed forwards, the reverse of the fifth. The inferior labials are seven in number, the posterior ones being very small and narrow; the third and fourth are very large; the second is nearly equal in size with the fourth upper labial, and the first nearly equal to the fifth of its own series. The symphiseal is semi-elliptical, and well developed. The submaxillaries or mental shields are very large; the anterior odd one is broadest; the second, on either side, are in contact for almost their whole length; the third and fourth diverge. Six or seven smaller plates, disposed upon a double row, terminate the submaxillary series at the angle of the mouth, and close to the anterior and lower rim of the auditive aperture. The latter is large and sub-circular, margined anteriorly with scales somewhat larger than those covering the middle of the temporal region. The extreme margin of the angle of the mouth is provided with small scales or else minute plates. The mental region, enclosed by the submaxillary plates, is covered with irregular and small scales, a narrow area of which may be seen extending to the lower edge of the auditive aperture. The anterior portion of the throat is provided with small polygonal plates, whilst the posterior portion of that region is covered laterally with minute, and upon its middle with rather small plates. The plates on the middle region of the posterior subgular fold are nearly equal in size to those of the anterior portion of the throat. On the margin of that fold they are again very small.

The anterior and upper surface of the forearm is provided with a series of five large polygonal and transversely elongated plates, surrounded with smaller ones, and beneath, posteriorly, towards the elbow, may be seen an area covered with about a dozen plates of a much smaller size, and rather subcircular than polygonal in their outline. The anterior and upper surface of the arm exhibits a series of transversely elongated plates, still larger and more numerous than on the forearm, surrounded likewise by smaller ones. The remaining portion of the surface of that limb is densely covered with small scales, assuming a plate-like aspect upon the middle region beneath and towards the elbow. The palm of the hand is covered with minute scales, and the metacarpus, opposite the external finger, is marked by a few small plates. The hand above is plated; the plates being a little smaller on the metacarpus than on the carpus. The fingers are protected above and below by a series of transversely elongated and uniform plates, extending to the very base of the nails. There is a lateral series of small scales separating the upper from the lower digital plates. The internal and external fingers are shorter than the others, and nearly equal in length. The middle one is a little longer than the adjoining two. The nails are well developed, compressed posteriorly, conical, acerated, and curved anteriorly. The anterior surface of the thigh is covered with plates of medium size, diminishing very much in size towards the inferior surface. The femoral pores, seventeen in number, limit the plated surface of that organ. They issue forth between an anterior suberescence small plate and two minute posterior ones. The inferior surface of the leg is covered with four longitudinal series of plates, very large upon the anterior series, and diminishing gradually in size upon the remaining series. The inferior surface of the metatarsus is protected by rather conspicuous and imbricated plates, whilst on the upper surface there exist minute scales. The tarsus exhibits four series of well-developed plates, which may be traced along the upper surface of the toes narrower upon the articulation of the phalanges than upon their middle region. The inferior surface of the toes is provided externally with a conspicuous series of small plates, and internally with two much smaller and irregular series placed along the thumb, the first (longest) and second toes, whilst these latter series are replaced by scales upon the fourth and fifth toes. The posterior surface of the tarsus is covered with minute scales, somewhat larger on the sole of the foot, between the thumb and the first (longest) and second finger. The plates on the upper surface of the tarsus and those on the inferior surface of the leg are contiguous upon the

external edge of the metatarsus behind the small toe. The nails are less developed than upon the anterior extremities, compressed at their base, acerated upon their extremity, and but slightly curved.

The dorsal and lateral regions of the body and upper surface of the hind legs are covered with very small and irregular scales. The inferior surface of the body is plated all over with quadrangular scutellæ, disposed upon ten longitudinal rows, the outermost of which is but imperfectly developed, upon the middle region of the abdomen. The second row, proceeding from the sides inwardly, is composed of scutellæ, nearly quadrangular, whilst on the three remaining rows the scutellæ are transversally longer, in the shape of an elongated quadrangle. Upon the anterior portion of the chest the series are interrupted and composed of smaller and irregularly-shaped scutellæ. The preanal region exhibits three rather large polygonal scutellæ surrounded by small plates, diminishing in size as they recede from the central group. The postanal region is densely covered with small plates or scales. The tail is long, subcylindrical, and tapering to a point. The scales which cover its surface are elongated and narrow, keeled upon their middle line, and disposed in verticils or circular rows. On the upper part and sides of that organ the scales maintain the same width throughout their length, whilst inferiorly some of them may be seen slightly tapering posteriorly. The ground-color is greenish, the head, the locomotory members, and the tail, marmorated with black. Two lighter stripes may be seen running along the sides, the uppermost starting from the surciliary ridge, the lower one from behind the eye across the auditive aperture, and parallel towards the posterior extremity of the body. Hence, along the sides of the tail to a considerable distance, the uppermost uninterruptedly above the hind limbs, the lower one with a break near the origin of the thighs. The area enclosed by these two vittæ or stripes is black, provided upon its middle region with a series of greenish subrounded spots. The region of the flanks beneath the lower vitta is either entirely black, with two or three irregular series of greenish spots, or else the green and the black mingle, and assume a meandric aspect. The external three series of abdominal scutellæ are provided with a black spot upon their middle. The dorsal region enclosed between the uppermost vitta presents a medial, light-greenish band, edged with transverse blotches of black, enclosing a quadrangular space of deeper green, occasionally mottled with black. Upon the occiput and neck most of the space is greenish. It is not improbable that the young will be found to possess a more defined dorsal vitta, mayhap, similar altogether to those now to be observed on the sides. The inferior surface of the head, the chest, the middle region of the abdomen, and the preanal region, are uniformly yellowish-green. The inferior surface of the fore-limbs is yellowish, the inferior surface of the hind limbs and tail whitish, obsoletely blotched with blackish.

Specimens of this species were collected at Chagres, isthmus of Panama, by the late Prof. C. B. Adams, of Amherst College, Massachusetts.

Plate XXXVIII, fig. 1, represents the profile of *Cnemidophorus præsignis*, size of life.

fig. 2, is an under view of the same specimen, showing the varied structure of the plates, scales, and scutellæ, referred to in the above description; *a* is an enlarged view of one from a femoral pore.

fig. 3, exhibits the head from above.

fig. 4, an enlarged toe.

fig. 5, an enlarged finger.

FISHES.

BY CHARLES GIRARD.

FAMILY OF PERCIDÆ.

Genus PERCICHTHYS, Girard.

GEN. CHAR. Body oblong or elongated, compressed, covered with scales of medium development, finely ciliated upon their posterior margin. Snout rather thick and blunt, overlapping slightly the lower jaw. Two dorsal fins contiguous at their base. Insertion of ventral fins immediately beneath the base of pectorals. Anal fin provided with three spiny rays. Tongue smooth. Upper surface of head, suborbitals and posterior dilatation of maxillary, covered with scales, as well as the cheeks and opercular apparatus. Suborbital and preopercle serrated. Opercle provided with a spine. Branchiostegals six or seven in number. Card-like teeth on the jaws; velvet-like teeth disposed upon a transverse band in front of the vomer and upon a narrow band along the palatines, sometimes only towards the anterior extremity of the latter bones.

SYN. *Percichthys*, GRD. Proc. Acad. Nat. Sc. Philad. VII, 1854, 197.

OBS. This genus, closely allied to *Perca*, is to be distinguished from it by the shape of the snout and the structure of the mouth; the presence of small scales on the top of the head, on the suborbital bones and (upper) maxillary; the position of the ventral fins, and by the presence of three spiny rays, instead of two, at the anterior margin of the anal fin. Moreover, the head, as a whole, has something of a scienoid touch about it.

Perca trucha, of Cuv. and Val.* which, according to M. d'Orbigny, is an inhabitant of the Rio Negro of Patagonia, is a species of this genus.

I am led to consider *Perca ciliata*, K. and V. H., from the island of Java, *Perca marginata*, Cuv. and Val., brought to France from the austral hemisphere by the navigator Péron, and *Perca trutta*, Cuv. and Val., from Cook's straight (New Zealand), as properly referable to the genus *Percichthys*.

Should this be true, the hitherto cosmopolite genus *Perca* would thus be restricted to the boreal hemisphere; the analogous species of the austral hemisphere constituting an allied genus or several allied genera, since one of the species of this group has led us to the establishment of another genus equally distinct from both *Perca* and *Percichthys*.

Perca laevis, Jen.,† an inhabitant of the Rio Santa Cruz, Patagonia, belongs also to the genus *Percichthys*, being closely allied to *P. trucha*, if at all distinct from it.

The following is the formula of its fins and branchiostegals:

Br. 7; D. 9—1/11; A. 3/9; C. 17; P. 15; V. 1/5.

Again, *Perca trucha* of Cuv. and Val. is not identical with the *Perca trucha* of the "Historia de Chile." The latter we propose to call *Percichthys chilensis*. The distinctive marks between

* Histoire Naturelle des Poissons. Tome IX, 1833, 429.

† Zool. of Beagle, IV. Fish. 1842, I, Pl. 1.

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